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Sequence Listing could not be accepted due to errors.

See attached Validation Report.

If you need help call the Patent Electronic Business Center at (866) 217-9197 (toll free).

Reviewer: Anne Corrigan

Timestamp: Fri Jun 08 19:25:03 EDT 2007

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Reviewer Comments:

<210> 13

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<221> primer_bind

<223> reverse primer specific for TCR BV3 used in real-time
PCR analysis

<400> 13

ggtgctggcg gactccagaa t

21

The above <213> Artificial Sequence is in an incorrect position; all numeric identifiers must be directly under each other. Do not use Tab keys. Same type of error in Sequences 20, 43, 50, 53, 68.

<400> 168

tacttctgtg ccagcagttc cctcgctact gctgaagctt tctttggaca aggc 54

??

??

??

??

Please delete the '?'s at the end of the submitted file.

* * * * *

Application No: 10612468 Version No: 2.0

Input Set:**Output Set:**

Started: 2007-06-07 09:18:35.574
Finished: 2007-06-07 09:18:39.094
Elapsed: 0 hr(s) 0 min(s) 3 sec(s) 520 ms
Total Warnings: 116
Total Errors: 118
No. of SeqIDs Defined: 168
Actual SeqID Count: 168

| Error code | Error Description |
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| W 213 | Artificial or Unknown found in <213> in SEQ ID (1) |
| E 224 | <220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (1) |
| W 213 | Artificial or Unknown found in <213> in SEQ ID (2) |
| E 224 | <220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (2) |
| W 213 | Artificial or Unknown found in <213> in SEQ ID (8) |
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| W 213 | Artificial or Unknown found in <213> in SEQ ID (10) |
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| W 213 | Artificial or Unknown found in <213> in SEQ ID (13) |
| E 224 | <220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (13) |

Input Set:

Output Set:

Started: 2007-06-07 09:18:35.574
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| Error code | Error Description |
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| W 213 | Artificial or Unknown found in <213> in SEQ ID (16) |
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| W 213 | Artificial or Unknown found in <213> in SEQ ID (18) |
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| W 213 | Artificial or Unknown found in <213> in SEQ ID (22) |
| E 224 | <220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (22) |

Input Set:

Output Set:

Started: 2007-06-07 09:18:35.574
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Elapsed: 0 hr(s) 0 min(s) 3 sec(s) 520 ms
Total Warnings: 116
Total Errors: 118
No. of SeqIDs Defined: 168
Actual SeqID Count: 168

| Error code | Error Description |
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| W 213 | Artificial or Unknown found in <213> in SEQ ID (24) |
| E 224 | <220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (24) |
| W 213 | Artificial or Unknown found in <213> in SEQ ID (25) This error has occurred more than 20 times, will not be displayed |
| E 224 | <220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (25) This error has occurred more than 20 times, will not be displayed |
| E 249 | Order Sequence Error <211> -> <213>; Expected Mandatory Tag: <212> in SEQID (146) |
| E 250 | Structural Validation Error; Sequence listing may not be indexable |

SEQUENCE LISTING

<110> Zhang, Jingwu Z.
Ho, Walter Kowk Keung
Zhang, Dongqing
Sun, Wei

<120> T Cell Receptor CDR3 Sequence and Methods for
Detecting and Treating Rheumatoid Arthritis

<130> D6622

<140> US 10/612,468

<141> 2003-07-02

<160> 168

<210> 1

<211> 21

<212> DNA

<213> Artificial Sequence

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<221> CDS

<223> part of the complementary determining region-3 (CDR3)
in the V(16 family (BV16 gene) of T cell receptors
(TCR) in patients with rheumatoid arthritis (RA)

<400> 1

agccaagctg acgggaccca t 21

<210> 2

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<221> CDS

<223> part of the complementary determining region-3
(CDR3) in the V(14 family (BV14 gene) of TCR in
patients with RA

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agttccgggg gcagctctgtt c 21

<210> 3

<211> 7

<212> PRT

<213> Homo sapiens

<220>

<221> Peptide

<223> conserved amino acid sequence derived from CDR3 of
TCR beta-chain BV16 in patients with RA

<400> 3

Ser Gln Ala Asp Gly Thr His

<210> 4
 <211> 7
 <212> PRT
 <213> Homo sapiens

 <220>
 <221> Peptide
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 TCR beta-chain BV14 in patients with RA

 <400> 4
 Ser Ser Gly Gly Ser Leu Phe
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<210> 5
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 <213> Homo sapiens

 <220>
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 <223> amino acid sequence motif derived from CDR3 of TCR
 beta-chain BV16 in patients with RA

 <400> 5
 Ser Trp Gly Gly

<210> 6
 <211> 113
 <212> PRT
 <213> Homo sapiens

<220>
 <221> Domain
 <223> amino acid sequence of human (beta-chain variable
 region V(14 of T cell receptors

<400> 6
 Met Gly Pro Gln Leu Leu Gly Tyr Val Val Leu Cys Leu Leu Gly
 5 10 15
 Ala Gly Pro Leu Glu Ala Gln Val Thr Gln Asn Pro Arg Tyr Leu
 20 25 30
 Ile Thr Val Thr Gly Lys Lys Leu Thr Val Thr Cys Ser Gln Asn
 35 40 45
 Met Asn His Glu Tyr Met Ser Trp Tyr Arg Gln Asp Pro Gly Leu
 50 55 60
 Gly Leu Arg Gln Ile Tyr Tyr Ser Met Asn Val Glu Val Thr Asp
 65 70 75
 Lys Gly Asp Val Pro Glu Gly Tyr Lys Val Ser Arg Lys Glu Lys
 80 85 90
 Arg Asn Phe Pro Leu Ile Leu Glu Ser Pro Ser Pro Asn Gln Thr
 95 100 105
 Ser Leu Tyr Phe Cys Ala Ser Ser
 110

<210> 7
 <211> 96
 <212> PRT
 <213> Homo sapiens

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 <223> amino acid sequence of human (beta-chain variable
 region V(16 of T cell receptors

 <400> 7
 Ile Glu Ala Gly Val Thr Gln Phe Pro Ser His Ser Val Ile Glu
 5 10 15
 Lys Gly Gln Thr Val Thr Leu Arg Cys Asp Pro Ile Ser Gly His
 20 25 30
 Asp Asn Leu Tyr Trp Tyr Arg Arg Val Met Gly Lys Glu Ile Lys
 35 40 45
 Phe Leu Leu His Phe Val Lys Glu Ser Lys Gln Asp Glu Ser Gly
 50 55 60
 Met Pro Asn Asn Arg Phe Leu Ala Glu Arg Thr Gly Gly Thr Tyr
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 Ser Thr Leu Lys Val Gln Pro Ala Glu Leu Glu Asp Ser Gly Val
 80 85 90
 Tyr Phe Cys Ala Ser Ser
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 PCR analysis

<400> 8
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 <211> 21
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<220>
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 PCR analysis

<400> 9
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<210> 10
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PCR analysis

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ggttatctgt aagagtgga cct 23

<210> 11
<211> 21
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PCR analysis

<400> 11
aggatgggca ctggtcactg t 21

<210> 12
<211> 24
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<213> Artificial Sequence

<220>
<221> primer_bind
<223> forward primer specific for TCR BV3 used in real-time
PCR analysis

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tcgagatatc tagtcaaaag gacg 24

<210> 13
<211> 21
<212> DNA
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PCR analysis

<400> 13
ggtgctggcg gactccagaa t 21

<210> 14
<211> 22
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<220>
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<223> forward primer specific for TCR BV4 used in real-time
PCR analysis

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 <210> 15
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 <220>
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 ttcagggctc atgttgctca c 21

 <210> 16
 <211> 21
 <212> DNA
 <213> Artificial Sequence

 <220>
 <221> primer_bind
 <223> forward primer specific for TCR BV5 used in real-time
 PCR analysis

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 <210> 17
 <211> 22
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 <220>
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 <210> 18
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 <220>
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<210> 19
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 <220>
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 <220>
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 <210> 21
 <211> 21
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 <220>
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 <210> 22
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 <220>
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 <210> 23
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<220>
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PCR analysis

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<210> 24
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<220>
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PCR analysis

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<210> 25
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<210> 26
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<210> 29
 <211> 21
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<220>
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<210> 30
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<220>
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<210> 31
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<220>
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<210> 32
 <211> 23

<212> DNA
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 <220>
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 PCR analysis

 <400> 32
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 <210> 33
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 <220>
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 <400> 33
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 <220>
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 PCR analysis

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 <210> 35
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 <212> DNA
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 <220>
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 <223> reverse primer specific for TCR BV14 used in real-time
 PCR analysis

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 <210> 36
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<223> forward primer specific for TCR BV15 used in real-time
PCR analysis

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<210> 37
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PCR analysis

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PCR analysis

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<210> 39
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<210> 47
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<210> 49
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<210> 55
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<210> 56
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<220>
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PCR analysis

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<212> DNA
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<220>
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PCR analysis

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<220>

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<210> 59
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<210> 60
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<210> 63
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